

Claims 1-23 remain in the application. Claims 18-23 have been withdrawn from consideration at this time.

In the section entitled "Claim Rejections - 35 USC § 102" on pages 2-4 of the above-mentioned Office action, claims 1-17 have been rejected as being anticipated by Marsh (US Pat. No. 6,284,655) under 35 U.S.C. § 102(e).

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claims 1, 16 and 17 call for, respectively, inter alia:

an adhesion layer disposed between said base substrate and said at least one barrier layer, said adhesion layer containing at least one material selected from the group consisting of titanium, zirconium, hafnium, cerium, tantalum, vanadium, chromium, niobium, tantalum nitride, titanium nitride, tantalum silicide nitride and tungsten silicide.

Marsh discloses a substrate formed by a silicon dioxide layer 40 and a polysilicon plug 65, whereby the polysilicon plug 65 is disposed in an opening of the silicon dioxide layer 40 (see col. 12, lines 35 to 48 and especially Fig. 2). A titanium

silicide layer 67 is located on the polysilicon plug 65, which in turn is covered by a barrier layer 75. The barrier layer 75 contains a conductive metal chosen from the group essentially consisting of aluminum, titanium, tungsten, ruthenium, osmium, iridium, rhodium and mixtures thereof (see col. 12, lines 45 to 48). The titanium silicide layer 67 serves the purpose of reducing the contact resistance between the polysilicide plug 65 and the barrier layer 75 (see col. 12, lined 38 to 42). The barrier layer 75 borders to a layer 85 which is preferably made of platinum (see col. 13, line 10) and which can contain platinum, iridium, rhodium, ruthenium, ruthenium oxide, rhodium oxide and iridium oxide (see col. 13, lines 17 to 20). The layer 85 in turn is covered with a dielectric layer 87, which in turn is provided with an electrode layer 88 so that the layers 85, 87 and 88 form a capacitor (see col. 13, lines 27 to 30).

Comparing the layers in Marsh with the micro-electronic structure according to the invention of the instant application, it can be seen that the metal silicide layer 9 of the instant application corresponds to the titanium silicide layer 67 of Marsh, and the iridium layer 25 as well as the iridium dioxide layer 30 of the instant application correspond to the barrier layer 75 made of iridium (see col. 12, lines 45 to 48) and the layer 85 made of iridium oxide (see col. 13, lines 17 to 23) of Marsh.

The invention of the instant application discloses a microelectronic structure including a base substrate and at least one barrier layer provided over the base substrate. Additionally, the invention of the instant application also has an adhesive layer 20 between the metal silicide layer 9 and the iridium layer 25 (see for example Fig. 1A). Such an adhesive layer should thus be provided in Marsh between the titanium silicide layer 67 and the iridium layer 75. This, however, is clearly not the case, because in Marsh the layer 75 is applied directly on the titanium silicide layer 67 (see col. 12, lines 35 to 44).

Clearly, Marsh does not show "an adhesion layer disposed between said base substrate and said at least one barrier layer, said adhesion layer containing at least one material selected from the group consisting of titanium, zirconium, hafnium, cerium, tantalum, vanadium, chromium, niobium, tantalum nitride, titanium nitride, tantalum silicide nitride and tungsten silicide", as recited in claims 1, 16 and 17 of the instant application.

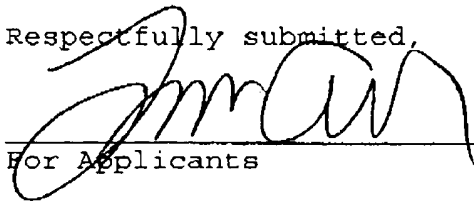
Claims 1, 16 and 17 are, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claim 1, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 1-17 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate a telephone call so that, if possible, patentable language can be worked out.

Please charge any fees which might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,



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